

IN THE CLAIMS:

Please amend the claims as follows:

- Sue D*
C1
1. (Amended) A method for the detection of a demyelinating disease comprising:
a) providing: i) a sample from a human suspected of having a demyelinating disease, and ii) iron binding protein;
b) reacting said sample with said iron binding protein in vitro; and
c) measuring the extent of binding of said iron binding protein to said sample, under conditions such that a demyelinating disease is detected.

- C2*
8. (Amended) The method of Claim 7, wherein said marker is selected from the group consisting of radioisotope and [fluorescent] fluorescent dye.

- C3*
- 10 (Amended) The method of Claim 1, wherein said measuring [if] is performed with a technique selected from the group of autoradiography and immunofluorescence.

Please add the following claims:

- Rule 124*
D
C4
11. (New) A method for the detection of a demyelinating disease comprising:
a) providing: i) a sample from a human suspected of having a demyelinating disease, and ii) iron binding protein wherein said iron binding protein is linked to a detectable marker;
b) reacting said sample with said iron binding protein in vitro; and
c) measuring the extent of binding of said iron binding protein to said sample, under conditions such that a demyelinating disease is detected.

- 18. +2.* (New) The method of Claim 11, wherein said sample is brain tissue.

Sur E4 19. ~~13.~~ (New) ~~18~~ The method of Claim ~~12~~, wherein said brain tissue is collected via surgical biopsy.

20. ~~14.~~ (New) ~~17~~ The method of Claim ~~11~~, wherein said iron binding protein is ferritin.

21. ~~15.~~ (New) ~~20~~ The method of Claim ~~14~~, wherein said ferritin is native.

22. ~~16.~~ (New) ~~20~~ The method of Claim ~~14~~, wherein said ferritin is recombinant.

CN7 C4 23. ~~17.~~ (New) ~~17~~ The method of Claim ~~11~~, wherein said marker is selected from the group consisting of radioisotope and florescent dye.

24. ~~18.~~ (New) ~~11~~ The method of Claim ~~17~~, wherein said radioisotope is ^{125}I .

25. ~~19.~~ (New) ~~17~~ The method of Claim ~~11~~, wherein said measuring is performed with a technique selected from the group of autoradiography and immunofluorescence.

26. ~~20.~~ (New) ~~11~~ A method for the detection of a demyelinating disease comprising:
a) providing i) a sample from a human suspected of having a demyelinating disease, and ii) an antibody reactive with an iron binding protein;
b) reacting said sample with said antibody in vitro; and
c) measuring the extent of binding of said antibody to said sample, under conditions such that a demyelinating disease is detected.

27. ~~21.~~ (New) ~~24~~ The method of Claim ~~20~~, wherein said sample is brain tissue.

28. ~~22.~~ (New) ~~27~~ The method of Claim ~~21~~, wherein said brain tissue is collected via surgical biopsy.